

REMARKS

Reconsideration and allowance of this application are respectfully requested in light of the above amendments and the following remarks.

Claims 10-18 have been canceled in favor of new claims 19-27. Support for the subject matter of the new claims is provided for example in the original claims and paragraphs [0060]-[0062], [0064], and [0082]-[0084] of the published specification. The amendments were not presented earlier due to the unforeseeability of the remarks presented in the Final Rejection.

Claims 10-18 were rejected, under 35 USC §103(a), as being unpatentable over Frodigh et al. (US 5,726,978) in view of Terry (US 2004/0009786). To the extent these rejections may be deemed applicable to new claims 19-27, the Applicants respectfully traverse based on the points set forth below.

Claim 19 defines a radio communication apparatus that: (1) selects a plurality of received OFDM subcarriers of higher reception quality, (2) generates one channel quality indicator (CQI) representing the reception quality of all of the selected subcarriers, and (3) reports the generated CQI and information indicating the plurality of subcarriers selected to a communicating party. The claimed subject matter provides an advantage of reducing the number of bits to transmit when reporting information about the reception quality of a plurality of subcarriers (see specification page 7, lines 2-6 and 20-23). (References herein to the specification and drawings are for illustrative purposes only and are not intended to limit the scope of the invention to the referenced embodiments.)

Frodigh discloses: (1) choosing a subset of M subcarriers from a larger set of N subcarriers available for communication on a link, as communication takes place on the link (see

Frodigh col. 10, lines 19-22), (2) periodically performing signal quality (C/I) measurements on the subcarriers of the subset of M subcarriers and interference (I) measurements on the subcarriers of the group of N subcarriers (col. 10, lines 61-62, and col. 11, lines 3-5), and (3) reconfiguring the subset of M subcarriers using the C/I and I measurements (col. 12, lines 17-21).

Frodigh's also discloses averaging the C/I measurements with the last n previous C/I measurements (column 11, lines 5 to 7) and transmitting the averaged C/I measurements that are averaged over time with respect to M subcarriers. Stated another way, Frodigh discloses transmitting M C/I measurements for M carriers.

Frodigh's disclosure of transmitting M C/I measurements for M carriers is not the same as, or similar to, the claimed subject matter of generating and transmitting one CQI that represents the reception quality of all of a plurality of subcarriers. Thus, Frodigh's system does not achieve the above-noted advantage of the claimed invention of reducing the number of bits to transmit when reporting information about the reception quality of a plurality of subcarriers.

Frodigh further discloses transmitting C/I measurements for the Y worst quality subcarriers of the subset of M subcarriers, where $Y < M$, and discloses that Y can be set to 1 (col. 11, lines 31-41). Thus, Frodigh's system transmits Y C/I measurements for Y subcarriers.

However, as mentioned above, Frodigh does not disclose the Applicants' claimed subject matter of generating and transmitting one CQI that represents the reception quality of all of a plurality of selected subcarriers. As a result, Frodigh's system does not achieve the advantage of reducing the number of bits to transmit when reporting information about the reception quality of a plurality of subcarriers.

Terry is not cited in the Final Rejection for supplementing the teachings of Frodigh with respect to the above-mentioned features distinguishing claim 19 from Frodigh's disclosure.

Accordingly, the Applicants submit that the teachings of Frodigh and Terry, considered individually or in combination, do not render obvious the subject matter defined by claim 19. Independent claims 26 and 27 similarly recite the above-mentioned subject matter distinguishing apparatus claim 19 from the applied references, although claim 26 does so with respect to a method. Therefore, allowance of claims 19, 26, and 27 and all claims dependent therefrom is warranted.

In view of the above, it is submitted that this application is in condition for allowance, and a notice to that effect is respectfully solicited.

If any issues remain which may best be resolved through a telephone communication, the Examiner is requested to telephone the undersigned at the local Washington, D.C. telephone number listed below.

Respectfully submitted,

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